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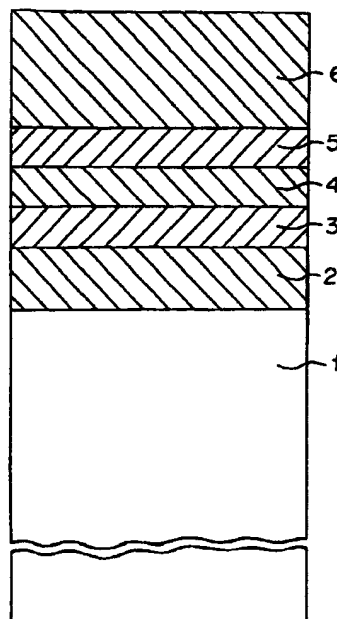
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(54) **Optical information recording medium and optical recording method**

(57) An optical information recording medium having a multilayer structure comprising at least a lower protective layer, a phase-change type optical recording layer, an upper protective layer and a reflective layer, on a substrate, wherein the phase-change type optical recording layer has a composition of  $Zn_{\gamma}In_{\delta}Sb_{\zeta}Te_{\omega}$ , where  $0.01 \leq \gamma \leq 0.1$ ,  $0.03 \leq \delta \leq 0.08$ ,  $0.5 \leq \zeta \leq 0.7$ ,  $0.25 \leq \omega \leq 0.4$ , and  $\gamma + \delta + \zeta + \omega = 1$ , whereby overwrite recording is carried out by modulation of light intensity of at least strong and weak two levels, so that a crystalline state is an unrecorded state, and an amorphous state is a recorded state.

**FIGURE 1**



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# EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims			
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CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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LACK OF UNITY OF INVENTION  
SHEET B

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-4,9-13

Optical information recording medium, comprising a phase-change type recording layer composed of a ZnInSbTe-based alloy.

2. Claims: 5-21

Optical information recording medium, comprising a phase-changr type optical recording layer composed of a GeSbTe-based alloy.

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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